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THE SANSKRIT LANGUAGE,
AS THE BASIS OF LINGUISTIC SCIENCE,
AND THE LABOURS OF THE GERMAN SCHOOL
IN THAT FIELD—
ARE THEY NOT OVERVALUED?

BY

T. HEWITT KEY, M.A., F.R.S.,
PROFESSOR OF COMPARATIVE GRAMMAR IN UNIVERSITY COLLEGE, LONDON.

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I had thought at one time of placing at the head of this paper: "Doubts of a Non-Sanskritist". But on reflection it seemed desirable that the title should be more definite. If the words I have actually used, be thought by any one to savour of national ill-will, I must give the assurance that nothing could be more remote from my purpose or from my feelings. Those who have to deal with the classical languages, must be either blind or ungrateful, if they fail to acknowledge the deepest obligations to the Scholars of Germany. The editions of Greek and Latin authors that have appeared in England during the last half-century, have not been numerous, but even of these a large proportion

¹ This paper, which grew out of an Introductory Lecture delivered at University College Nov. the 24th 1862, was read at the Philological Society of London January the 2nd and 16th; and was subsequently the subject of discussion at a special meeting on the 30th.

have been simply reprints of German works. Again the Lexicons of the two languages that have issued from the English press during the same period, are for the most part so thoroughly of German material, that it would have been more creditable, if the title-pages had carried the words: "Translated from the German of with some few changes and additions". Again, if we turn our thoughts to the opposite side of the English Channel, we find no great activity in the sphere of Classical, especially Greek Literature; yet what progress is visible there, is chiefly due to the energy of German, not French Scholarship, as witness the valuable collection of Greek Authors that has proceeded from the press of Didot. Nay, the high and indisputable reputation that Germany has won in this field, only renders the duty more imperative to watch lest failure or shortcomings on any side should be kept from notice owing to that very prestige. Further I wish it to be observed that the term I have used, is 'overvalued', which is quite competible with an admission of great value; and again, I put what I have said in the form, not of a proposition, but of a question. It is only when that question is answered in the affirmative, or when the arguments put forward in this paper remain unanswered, that any the slightest damage can be done to the reputation of the philologers concerned. It would have been simply indecent, if the present writer had expressed his fears in the form of a direct proposition, conscious as he is that he comes to the enquiry wholly destitute of what may at first sight be deemed an essential requisite, a knowledge of the Sanskrit language. Nay, he cannot pretend even to that smattering which may be obtained by a three weeks study of the language, and which has before now served to float a big book in the English market, a little sprinkling of the Devanagari character and a judicious use of the hard words 'Vridhhi, Anuswara, &c.', passing for profundity in the eyes of the uninitiated. Such little knowledge as I have is that only which may be acquired in the perusal of grammars and glossaries and works of like nature.

The question here naturally suggests itself, how it is that I have taken upon myself to enter into a contest for which I am confessedly so ill-equipped; and my answer is that I find the same suspicions which have found a way into my own mind entertained by many others, and those too gentlemen whose position as scholars gives great weight to their opinions, though, like myself, they are wholly wanting in the special qualification, a knowledge of Sanskrit. In every point of view then it seems desirable that the question should be raised. If our fears are ill-founded, it is well that they should be removed, and the road more thoroughly cleared of all obstruction for the Sanskritist. If otherwise, it is surely good for the progress of philological science, that the matter should be thoroughly sifted.

I do not purpose to enter into the domain of Sanskrit history and chronology, a task for which I am wholly unfitted, especially as those who have the best qualifications, admit that it is involved in the greatest obscurity, nor indeed could one expect easily to find materials for accurate investigation in such a Literature as that of the Vêdas. The 'Mantras' on the one hand, dealing for the most part with 'the Devotional', and the 'Brahmanas' on the other with 'the Ceremonial and Dogmatic', can scarcely be available for such a purpose. As to the Upanishads or the short appended treatises I will be satisfied with a second-hand quotation from a work of a learned Hindû, that they "contain "some rude indications of philosophic thought, and like the "twinkling of the stars in a dark night may occasionally "serve as guides in a history of Hindû philosophy. They "do not however exhibit any great attempt at method, arrangement, classification, or argument. Even there the "poetry predominates over the logic. Bold ideas abruptly "strike your fancy, but you find no clue to the associations "which called them forth in the author's mind, and search "in vain for the reasons on which they are based. Sublime "thoughts are not wanting, but they resemble sudden flashes, "at which you may gaze for a moment, but are immediately "after left in deeper darkness than ever. Nor are they free

“from those irregular flights of the imagination in which “poets with vitiated tastes delight to indulge, setting at “defiance all rules of decency and morality” (Banergea, Westminster Review, New Series, Vol. xxii, p. 463).

An argument for the antiquity of the Sanskrit Language has recently been founded (Lectures on the Science of Language by Max Müller, p. 204, third edition) upon certain passages in the Book of Kings and the Book of Job, but it is an argument which, as it appears to me, withers to the touch. All rests upon the statement that four articles imported from Judea in the days of Solomon, viz. the ape, the peacock, ivory, and sandal-wood, are called in the Hebrew text by names foreign to that language, but indigenous in Sanskrit. But it is not an easy matter to prove that a word is indigenous in a language, and the Sanskrit-speaking race on their first entrance into the Indian peninsula (for they are allowed on all hands to have been immigrants) would naturally adopt the native, that is Non-Sanskrit terms for those objects which are peculiar to the country, provided indeed they had not already adopted them in the previous intercourse of commerce. But passing over this consideration, let us throw a glance at each of the four words, on which this important superstructure has been erected. *Koph*, the Hebrew for ‘ape’ is, we are told, “without an etymology in the Semitic languages, but nearly identical in sound with the Sanskrit *kapi*.” It is of course implied here, though not said, that the Sanskrit does supply a satisfactory etymology for its *kapi*. To supply the omission I turn to Bopp’s Glossary, and there find that *kapi* ‘ape’ has for its root the Sansk. vb. *kamp* ‘tremble’, so that for some reason denied to us the ape was conceived by the Indian mind as ‘the trembler’. Then ivory has for one of its Hebrew names *shen habbim*, where as *shen* means ‘tooth’, *habbim* might well speak of the ‘elephant’, and this, it is said, “is most likely a corruption of the Sanskrit for elephant *ihha*, preceded by the Semitic article.” If, as I suppose is the fact, *ihha* be a misprint for *ibha*, the resemblance is even then limited to the consonant, and we have nothing

offered in the way of proof that this name for the elephant is the original property of Sanskrit. Thirdly *tukhi-im*, in Hebrew 'peacocks', bears no doubt a tolerably close resemblance to the Malabar name *togēi*; and this "in turn has been derived from the Sanskrit *śikhin* 'furnished with a crest'". Lastly the Malabar and Sanskrit name for sandalwood is *valguka*; and "this *valgu(ka)*", the Professor says, "is clearly the name which Jewish and Phoenician merchants corrupted into *algum*, and which in Hebrew was still further changed into *almug*." I would submit that at any rate the word 'clearly' is somewhat out of place in an etymon which involves four assumptions, the aphaeresis of *v*, the apocope of *ka*, a paragogic *m*, and the metathesis of *gum* to *mug*. Even if true, such derivations have scarcely strength enough to serve as the foundation of so large a theory¹.

But the same writer has elsewhere (History of Ancient Sanskrit Literature, p. 524) contended that the Vēdas have an antiquity far older than the knowledge of writing. "The collection of the (Vaidic) hymns and the immense mass of the Brāhmaṇa literature were preserved", he says, "by means of oral tradition only." In another passage of the same work (p. 507) he tells us that "before the time of Pāṇini, nay even when he himself wrote (*sic*) his great work, writing for literary purposes was absolutely unknown." To understand the full force of this proposition, to form an adequate idea of the extent to which the Professor would tax the mnemonic powers of the Brahmans, we must remember that Pāṇini, according to his own authority, was preceded by whole generations of Grammarians. In his recent Lectures on Language (p. 110) he says: "Those valuable lists of words, irregular or in any other way remarkable, the Gaṇas, supplied that solid basis on which

¹ I leave this as I wrote it, but I have since found that Prof. Max Müller has borrowed the whole argument from Lassen's 'Indische Alterthumskunde, Vol. i, p. 538 &c.', so that the setting alone is his own. It is true that he himself refers to this passage of Lassen; but his reference is so placed that a reader might well suppose the argument about 'ivory' alone to have been drawn from Lassen.

successive generations of scholars erected the astounding structure that reached its perfection in the Grammar of Pânini." But if the structure be "astounding" and "the perfection of a merely empirical analysis of language", it seems not to be possessed of much that would be interesting to the mere European scholar, for the Professor concludes his panegyric with the words: "Yet of the real nature and natural growth of language, it teaches us nothing."

As regards the Vêdas themselves, one can readily imagine that religious feeling and poetical feeling combined may do much to invigorate the powers of memory, while the mere rhythm of verse contributes to lighten the task; but intense indeed must have been the feeling of duty which could induce Brahmans to commit to memory and there retain a complete library of the driest Grammarians.

The whole argument then carries with it, as it seems to me, its own refutation; and in truth the challenge implied in the words: "I maintain that there is not a single word in Pânini's terminology which presupposes the existence of writing"—has already received a twofold answer from my colleague, Professor Goldstücker (Pânini, his place in Sanskrit Literature, 1861); first a self-refutation, quoted from the Oxford Professor's own words: "This last word *lipikara* (a writer or engraver) is an important word, for it is the only word in the Sûtras of Pânini which can be legitimately adduced to prove that Pânini was acquainted with the art of writing;" and as my colleague observes (p. 17): "It is obviously immaterial whether another similar word be discoverable in his Grammar or not; one word is clearly sufficient to establish the fact." But he further produces from Pânini's own work an abundant supply of terms which could have no meaning whatever when writing was unknown. Let me quote one more passage from the same admirable book (p. 14): "As according to his, Max Müller's, view, Pânini lived in the middle of the fourth century B. C. (pp. 245, 301 ff.), it would follow that, according to him, India was not yet in possession of the most useful of arts at the time when Plato died and Aristotle flourished."

I have entered into these details to show the unsatisfactory condition of the chronology of Sanskrit Literature, and at the same time I would suggest the question whether there should not be a little more caution in the acceptance of literary conclusions even from those to whom the English public has been accustomed to look as authorities above all controversy.

But if we cannot have the advantage of a reliance on Literary history, we must be content to examine the internal evidence supplied by the language itself and the dealings therewith alike of Indian and European authorities. As my own doubts, and I believe those of the friends to whom I have already alluded, were first raised by what appeared to us as most strange though generally sanctioned etymologies, I will proceed to produce some of these, limiting myself for the most part to a single class.

Already Max Müller (Lectures on the Science of Language, p. 369) himself quotes as an example of Indian etymology the derivation of the sb. *kāka* 'crow' from *apā-kālayitavya*, i. e. 'a bird that is to be driven away', but adds that Yāska, another Grammarian, anterior to Pāṇini, considered *kāka* to be an imitation of the bird's note. Whether the Professor himself adopts or rejects this mimetic origin of *kāka*, his words do not enable one to say. But be this as it may be, in another Sanskrit noun, *kārava*, Lat. *cor(o)vo* 'raven', he steadily refuses to see, what for one I must regard as a still more exact imitation of the bird's note, viz. *cor cor*. Had he included in his view the Greek *zog-αx*¹, he might perhaps have assented to Pott's doctrine (E. F. ii, 506, 7) that *αx* in Greek substantives is a suffix of diminutival power, so that *zog* alone would be the root. He himself, in his aversion to what he calls by way of disparagement the Bow-Wow theory, strives to deduce the whole family, *kārava*, *zogovn*, *raven*, &c., from the Sanskrit verb *ru*, to which he ascribes "a general predicative power" as

¹ We must not suppose the ancients in their nomenclature to have distinguished with modern accuracy the raven, the rook, and the crow. (See Mr. Wedgwood's paper on that subject.)

expressing sound, "from the harshest to the softest", and so applicable "to the nightingale as well as to the raven", nay even to "the barking of dogs" and "the mooing of cows". In a note however, he hesitates between this etymon and one from the Sansk. *kāru* 'singer'. To the special honour of this last derivation the raven seems to be about as well entitled as the parrot or the peacock; and the deduction of *kārava* from *ru*, a general term implying 'sound', would probably be regarded by lawyers as 'void for uncertainty'.

The same objection of excessive generality applies to the whole class of etyma with which I now propose to deal, viz. those of words ascribed to roots of various forms, but with the one meaning 'to go'. Thus the S. *go* (*gav*), the equivalent in power and probably in form of Lat. *bov*-, Gr. *βov*-, as also of our own *cow*, is deduced by Sanskritists of all classes, Indian and European, from a S. vb. *ga* 'go'; and that this explanation of the word may not suffer for want of company, I may add the S. *ilā* 'cow', referred by Bopp (Gloss.¹ s. v.) to the vb. *il* 'go'. Now that animals like the 'hare' or 'stag' should receive a name from their marked power of locomotion, is, at any rate on the logical side, admissible, and thus we may perhaps be ready to assent to the current etymologies of *hare* (Germ. *hase*) the Lat. *lepos*- and the Gr. *ελαφο*-. But the cow is scarcely entitled to put in a claim for such distinctions as against any other living creature. Strangely enough the same pair of words, *go* and *ila*, also signify 'earth', and these also have the same origin ascribed to them (Bopp, Gl. s. vv.). So also the Gr. *γαία* passes with Bopp (V. G. § 123) as standing for *γαΐα*, and so an adjectival offspring of a sb. corresponding to the S. *go* 'earth' and eventually of such a vb. as *ga* 'go'. In the same section S. *gmā* 'a name for the earth in the Vêda-dialect' is deduced from the S. vb. *gam* 'go'. Nay our own *earth*, though it comes immediately from

¹ I have preferred to draw from this work, although now somewhat out of date and superseded by other works, simply because it comes from the founder of the science.

our old English vb. *ear* 'plough', represented in Sanskrit by *ar*, is traced ultimately to the S. *r* 'go' (Bopp, *ibid.*, M. Müller, *Lectures on Language*, p. 256, and Pott, *E. F.* i, 218). It would be an interesting fact, if such a series of at any rate consistent etymologies could be accepted as proofs that the Hindú mind had already discovered the motion of the earth, whether about its own axis or about the sun. But as it seems more probable that then as now there existed an inveterate tendency to treat the earth as the one fixed object to which all the movements around us are conveniently referred, we must look for some other explanation of the theory; and accordingly Bopp suggests that the movement of the earth must here be regarded as only 'passive', in other words, the *earth* (*erde*) is 'the betridden one' ('die betretene'). Though it does not visibly move itself, man and beast would be in an awkward predicament for locomotion if there were no earth to move upon. Before leaving the earth I ought to notice that Prof. M. Müller believes (p. 257) our word *aroma* to be another ramification of *ar* 'plough' and *r* 'go', for does not Jacob say (*Gen.* 28, 27): "the smell of my son is as the smell of a field which the Lord has blessed"?

From land I pass to water, but the same etymology pursues us. Thus the *Ganges* itself is the Sanskrit *Gangá*, literally the "Go Go" (M. Müller, *ibid.* p. 384). So we have S. *salila* 'water' from S. vb. *sal* 'go' (Bopp, *Gloss.* s. v.); S. *ap* 'water', the analogue of the Lat. *aqu-a*, from vb. *ap* 'go', *sarít* 'river' from vb. *sr* 'go' (M. M. *ibid.* p. 253) and *saras* 'water' from the same vb. (*ibid.*). This last noun is by Bopp translated by the Lat. *lacus* and declared to be one with the Gr. *ἐλος* (cr. form *ἐλεσ-*) 'a marsh', in which case the notion of 'going' seems to disappear. Yet after all Sanskritists may contend that marshland, being half water, half land, has a double claim to a derivation from roots which denote 'going'.

Take next the class of worms and reptiles. Bopp, for example (*V. G.* § 86, 1), refers the Lat. *vermi-* (= *quermi-*) and S. *krími* to the S. vb. *kram* 'go'; the Germ. *schlange*

'snake' to S. vb. *śraṅg* 'go'; and the Lat. *serpens*, S. *sarpa*, first to S. vb. *srp* 'go' and ultimately to *sr* 'go'. Had any of these verbs meant 'go by little and little', the derivation would have been satisfactory, but the meanings given by Bopp in his Glossary to these verbs as well as to all their compounds furnish no authority for such an assumption. No doubt in his comparison of the vb. *srp* with kindred languages he dwells much on the idea of slow movement in those kindred languages, and again Prof. Wilson in his grammar, though he adds the meanings 'creep or glide', gives precedence to the general term 'to go'. I cannot but think however that the suffix of *srp* as compared to *sr* and that of the Lat. *ser(e)p-* with the varieties of $\epsilon\rho(\epsilon)\pi-$ and L. *r-ēp-* (*rēpere*), Eng. *c(e)r-ep* (*crep-t*, *creep*), Germ. *kr-iech-en*, and with an additional suffix of diminution *cr-aw-l*, represent the idea *paulatim*, as it seems to do in the Lat. *car-p-* (see my paper on the suffix *agh* &c., Trans. for 1856, p. 336). When I wrote what is there seen, I expressly stated that I was at a loss for the root *ser* 'go'. This I now find in the S. *sr*, although I still believe a form *ker*, as seen in *creep* and *kriech-en*, to be more genuine than *sr* with the sibilant. I am not deterred from regarding the two roots as substantially one by the fact that as a rule the guttural *k* or *c* of western Europe is usually represented by the palatal *s* of Sanskrit, not by that which occurs in *sr* and *srp*.

Another class of words, which Bopp is disposed generally to refer to roots significant of simple movement, are those which denote time (da überhaupt die Zeitbenennungen meistens von Wurzeln der Bewegung stammen, V. G. § 69). For instance our word *year*, old Germ. *jār*, together with what he regards as an equivalent in form, the Gr. $\acute{\omega}\rho\alpha$ 'season', is referred by him to the S. vb. *ya* 'go', but by Lassen and Burnouf it seems to S. vb. *īr* 'go'. Again the Goth. *aivs* (crude form *aiva*) as well as its relatives Lat. *aevum*, Gr. $\alpha\iota\omega\nu$, is deduced by Bopp, Graff, and Kuhn from S. vb. *i* 'go' (ibid.). The *i* might perhaps not have passed with the ill-informed as forming the kernel of these

words; but all is accounted for; the initial *a*, it seems, attains its position through 'Guna', and all that follows the *i* (or *e*) is to be regarded as a suffix. In spite of such a combination of authority I am still disposed to prefer my own etymology of *aevum* from the Lat. *auge-* (for the vowel-change compare the variety seen in the allied *αεξ-ω* and *αυξ-αυ-ω*) with 'growth' for the original sense, as exhibited in the well-known line, *Crescit occulto velut arbor aevo*, 'grows like a tree with growth concealed'. The Lat. *saeculum* is also referred by some Sanskritist to a vb. signifying 'to go', but as I have mislaid my authority, I will proceed to another Latin noun. As Bopp (Gloss. s. v.) considers S. *amati* 'time' a derivative from *am* 'go', so he is also inclined to deduce from the same stem the Lat. *annus* (as standing for *amnus*) as well as the Gr. *ενος*. That *amnus* was in fact the older form of *annus* is proved alike by the derived *sol-emni-s* and by the Oscan or Umbrian *amno-*; but to the derivation from a vb. 'to go' I would oppose that other derivation which connects it with the Lat. prep. *am* 'round', German *um*. The very idea of a year implies a circle, and the words *annulus* 'a ring' and the noun *ānus* with a long vowel, seem to complete the proof. On the same principle the word *year* itself, like *yar-d* 'an enclosure' and *gar-d-en* &c., claims kindred with many words denoting a circle, as *χορ-το*, *hor-to*-, *χορ-ο*-, *cor-o-na*-, *cir-co*-. The initial change between a Gr. *χ*, Lat. *h*, and a *g* (*y*) in German and English is in accordance with the usual law, as seen in *χθες*, *heri*, *hesterno*-, *gestern*, *yesterday*.

So much for the alleged deduction of substantives from Sanskrit verbs signifying 'to go'. But in the formation of secondary verbs also the roots *i* 'go' and *yā* 'go' are thought by Bopp well fitted to play important parts, as for example in furnishing suffixes by which verbs are converted into passives (§ 739) and causals (§ 740). As regards the former, if *kōrā yāi*, to take Bopp's own example from the Bengali, have for a literal translation 'I am made' ('ich werde gemacht'), as given by himself, then *gemacht* is by itself already a passive, just as *verloren* is in the modern German

gehen verloren, literally 'to go lost'. We too may say 'become detested' or 'become fascinating', where the distinction between the passive and the active idea turns upon the accompanying participle, not upon the word 'become'. Again Bopp's illustration from the Latin *amatum iri* is surely not applicable. If the principle, for which he is contending, be valid, we ought already to have a passive in the indicative phrase *amatum eo* 'I am going to love', but this is a mere future of the active. The introduction of a passive of *eo*, whether in the indicative as *amatum itur* or in the infinitive as *amatum iri*, is only a convenient mode of exhibiting an impersonal verb, equivalent to the French *on va aimer*. The examples of *veneo* and *pereo*, quoted by Bopp, are at first sight more to the purpose, and he would have done well to strengthen his case by comparing them with *vendo* and *perdo*. Yet after all *venire*, standing for *venum ire*, means probably 'to go into the window' and so 'be exhibited for sale' which certainly is more truly the meaning of the phrase than 'to be sold'. Again *perire* 'to come to an end', like the English *go to the dogs* or the Greek *εργε ες χοραν*, contains no doubt what is virtually a passive idea, but this arises from the combination with the *per* and the *ες χοραν* &c. That 'go' does not carry in itself the idea of a passive, is clear from our own phrases 'go to the Bar' or 'into the Church' or 'into business'. Curtius (Beyträge p. 329) goes still farther and conjectures that the *θη* which appears in the aorist and future of Greek passives, is connected with the S. vb. *yâ* 'go', in which however all resemblance seems limited to the long vowel. I pass then from the passive.

The causal mood of the Sanskrit verb, as well as the tenth conjugation in general, having for their distinguishing character the syllable *ay*¹, Bopp's mind is divided by a doubt whether this suffix should be referred to the vb. *i* 'go' or *i* 'wish'. The latter one would think is far better fitted for the formation of a desiderative mood, which, it seems, is

¹ Of causals some make *ay* the suffix, some *ya*.

a general appendage to the Sanskrit verb. Nor does *i* 'go' at first sight appear a satisfactory element for the purpose of constituting a causal verb; but we are assured by Bopp (§ 740) that several Sanskrit words which denote 'motion' at the same time denote 'making'. Whether the particular verb *i* has this convenient privilege, he does not stop to tell us. Assuming however that it has, we have before us a strange combination, that roots expressive of 'going' are alike fitted to form passives and to form actives.

But further although the causative idea is declared to be the character of the tenth conjugation, I find little proof of this in the list of 57 verbs quoted by Prof. Wilson in his Grammar, for of all these at the utmost one in five can be explained as containing the idea of 'to make'. Thus the first ten in the series are translated by the English verbs 'steal, disrespect, hurt, send, wink, speak, play, be feeble, be able, sound'. I am not then surprised to find in § 772 such a sentence as "It deserves however notice that in Sanskrit denominative verbs in *ya*¹ occasionally avail themselves of the causal form without any causal meaning." My own feeling is that the original notion *paulatim* resides in *ay*, and that it is the Sanskrit variety of that suffix which I have discussed at length in my paper on *agh* or *ag*, the passage of a *g* between vowels (*ayāmi*) into a *y* being a common occurrence. On this theory the meaning may well pass into that of frequentative or continuous. But leaving this question open, if we accept that one of Bopp's two explanations which finds in the suffix of the so-called Sanskrit causals or tenth conjugation the root *i* 'go', we shall have to assign to this use of the word a somewhat vast domain in the Classical and German Languages, for Bopp connects with the same type all the vowel-verbs of the Latin, at any rate the first, second, and fourth conjugations of that language (§ 745 c.), all the Greek verbs in *εω*, *αω*, *οω*, *αζω*, *ιζω* (§§ 109 a. b., 749, and 762), together with the particular verbs *βαλλω*, *στελλω*, *ταλλω*, and *ιημι*; and lastly

¹ See the note on the preceding page.

all the weak verbs of the German stock (§ 109). A few of these verbs specially noticed by Bopp himself may claim a few words. We are assured that the Latin *facio* = S. *bāv-áyāmi*, literally 'I make to be'; *iacio* = *yáp-áyāmi*, 'I make to go'; *doceo* = *gháp-áyāmi* 'I make to know'; *rapio* = *ráp-áyāmi* 'I make to give' (§ 747). It seems somewhat damaging to this theory that the suffixes (*i* or *e*) of the Latin contribute but little to the formation of the causative idea, seeing that *fac-*, *iac-*, *doc-*, *rap-* already express the full notion of 'making, throwing, teaching, robbing'; as may be seen in the forms *fac-ere*, *iac-ere*, *rap-ere*, and in *fac-tus*, *iac-tus*, *doc-tus*, *rap-tus*. *Yá-p-áyāmi* is thought to possess a second suffix of causation in its *p*, so that *yá* 'go' is the real base of the verb; and if this case be doubtful, a causal *p* is declared with greater certainty to be an element in *ghá-p-áyāmi* 'I make to know', *ghá* (or in English characters *gná*) being what Bopp is pleased to call a root-verb, the equivalent of our *know*. But of this *gná* more hereafter. To place Bopp's doctrine clearly before me, I throw aside the equivalent portions *eo* and *áyāmi*, and there results the equation Lat. *dōc* = S. *gnáp*. The palatal *j* of the Sanskrit is with reason assumed to be a corruption of a medial guttural *g* or *γ*. Then *dōc* is to be proved equal to *gnáp*. I make no difficulty about the final consonants, for a Lat. *c* habitually corresponds to a S. *p*. But there still remain three problems for solution, to identify the *d* with *g*, the short *o* with the long *a*, and to account for the appearance of *n* in the Sanskrit or its disappearance from the Latin. For the first Bopp simply quotes the instance $\Delta\eta-\mu\eta\tau\eta\rho = \Gamma\eta-\mu\eta\tau\eta\rho$; on the difference of vowel he says nothing. The difficulty as to the nasal is disposed of by the assurance that for *ghá-nā-mi* 'I know' there occurs an actual *gá-nā-mi*, and that in Persian there exists the form *dā-ne-m* 'I know'. But surely the asserted loss of an *n* from *ghá-nā-mi*, when followed so closely by a second *n*, is but a poor justification for the disappearance of an *n* in *doc* for *dnoc*. For one then I must regard the *doc* of *doceo* as better explained within the limits of the Classical languages by

dec of *deico* (= *dico*) and *δεικ-νυμι*, by the *δακ* of *δι-δα(κ)-σχω*, *δι-δακ-τος*, and *δακ-τυλος*, by the *dic* of *di-dic-i* and *dig* of *dig-itus*. But if I must look to the Sanskrit, here too I find a thoroughly admissible representative in the vb. *dis* 'show' with that palatal *s* which regularly corresponds to a Western *k*-sound; and indeed Bopp himself I find, in his Glossary, regards this root *dis* as one with the root of *δεικνυμι* and the Lat. *dico*¹.

The *p* of *rap-* or *rapi-*, as also that of the S. *rāp-ayāmi*, is again treated by Bopp as of causal power, and he finds in his root *rā* 'give' only a variety of *dā* 'give'. Thus 'to give' and 'to cause to give or rob' owe their marked difference of meaning to the causal suffix, not that this is an essential matter with him, for this same root *dā* or *rā* is thought by him to be identical with the S. vb. *lá*, to which simple form is ascribed the double meaning of 'to give' and 'to take', a mixture of ideas that might lead to inconvenient results¹.

So much for the value to the Sanskritist of his roots signifying 'to go' in the way of etymology; and the stock is no small one. Taking of the ten conjugations the first

¹ As some friends well acquainted with Sanskrit could scarcely believe that a writer like Bopp could have published such 'extravagancies', I will quote his very words (§ 747): "Kann ich aber das *c* der genannten Form (*facio*) nicht mit dem skr. causalen *p* vermitteln, so glaube ich doch dem Lateinischen noch ein anderes Causale nachweisen zu können, worin *c* die Stelle eines skr. *p* vertritt, nämlich *doceo*, welches ich im Sinne von ich mache wissen auffasse und für verwandt mit *di-sco* (eigentlich ich wünsche zu wissen) und dem gr. *εἰδέναι*, *διδάσκω* halte. Ist das *d* dieser Formen aus *g* entstanden (vgl. *Ἀγνῆτις* aus *Γηνήτις*), so führt *doceo* zum skr. *gñāp-āyā-mi*, ich mache wissen (*gñā-nā-mi* ich weiss für *gñā-nā-mi*) und zum pers. *dā-ne-m* ich weiss. Als ein Beispiel eines lat. Causale, worin das ursprüngliche *p* unverändert geblieben wäre, erwiese sich *rapio*, im Fall es dem skr. *rāpāyāmi* ich mache geben entspricht, von der Wz. *र* *rā* geben, die, wie mir scheint, nichts anders als eine Schwächung von *dā* ist. Auch kommt, sowie neben *dā* eine erweiterte Form *dās* besteht, neben *rā* im Vêda-Dialekt *rās* vor. Mit *rā* und *dā* scheint auch ihrem Ursprunge nach die Wz. *lá* identisch, welcher die Bedeutungen geben und nehmen zugeschrieben werden."

alone, and again limiting myself to the series which Professor Wilson quotes in his grammar as 'the most useful verbs of this conjugation', I find just twenty, viz. 1. अज् *aj* 'to go'; 2. अट् *at* 'to go'; 3. इ *i* 'to go'; 4. दु *du* 'to go'; 5. उख् *ukh* 'to go'; 6. ऋ *r* 'to go', 'to gain'; 7. ऋज् *rj* 'to be straight' or 'honest', 'to gain', 'to go', 'to live'; 8. क्रम् *kram* 'to go', 'to walk'; 9. गम् *gam* 'to go'; 10. विक्क् *vichchh* 'to go'; 11. चर् *char* 'to go'; 12. ढौक् *dhauk* 'to go'; 13. पत् *pat* 'to go', 'to fall'; 14. शद् *śad* 'to wither' or 'decay'; 'to go', with this appended: When the verb means 'to go' the causal retains the final, शादयति *śadayati* 'he causes to go', or 'drives'; 15. सद् *sad* 'to decay', 'to be sad', 'to go'; 16. सस्ज् *sasj* 'to go'; 17. सिध् *sidh* 'to go'; 18. सृ *sr* 'to go'; 19. सृप् *srp* 'to go', 'to creep' or 'glide'; 20. स्कन्द *skand* 'to go' or 'approach'. I should have made some addition to this list, had I included those verbs which only express a more special or limited form of motion, as 'per-vade, jump, hasten, run, gallop, approach, wander'.

With such an abundance of verbs to draw from, a philologist should the more hold himself bound to proceed with caution, and so take care that the logical connection between the root and the supposed derivative should be well-marked. Whether the examples I have quoted exhibit such caution, I leave to others to decide. Lastly I think it right to repeat that by confining myself almost wholly to those instances of bold etymology which deal with verbs signifying 'to go', I avoid the charge of selecting instances favourable to my view. Indeed without some such limitation, it would be an easy matter to pick holes in any of the most carefully elaborated philological works, for the most cautious etymologist is apt to be carried away at times by tempting theories. In the next section of my paper I purpose more particularly to consider Bopp's celebrated work, the 'Vergleichende Grammatik', in its general system.

In the short discussion which followed the reading of the above, it was replied on one side that the idea of 'to go' was precisely that which was well adapted to denote an

active verb. To this I answer that a vb. 'to go' was equally claimed for the special formation of passives; but in truth the argument seems to me upset by its very generality. What is fitted to denote every form of action, is for that reason unfitted to denote any form of action. The very essence of language is distinction or difference. Accordingly the other answer to the difficulties I had raised was that although simple 'going' is commonly assigned as the meaning of the verbs I have quoted, yet in truth each of them originally denoted some special form of going. I will only reply to this that I took the verbs with the meaning attached to them by the several authorities from whom I was quoting. But over and above this, when the discussion was brought to the individual substantives, I found that the Sanskrit scholars who were present, employed in the defence of the Indian etymologies a vagueness as complete as that expressed in the general term 'going'. Thus *go* and *ilā* 'the cow', and *go* and *ilā* 'the earth' were said to be well entitled to such derivation, as being in the Indian mind the centres of activity most important to man.

I take the opportunity of making a slight addition to the paper. As *ṣṛ*, according to Wilson's Grammar (p. 200), at times signifies 'to go quickly' or 'run', I am the more justified in attributing to the suffixed *p* of *ṣṛp* the power of *paulatim*. At any rate it has no causal power here. Further if the Sanskrit vocabulary could deduce from a verb signifying 'to run' by the addition of this suffix a secondary verb *ṣṛp* 'to creep', I am justified in connecting our own *cr-ep* (whence *creep* and *crep-t*), as regards its root, with the base of the Dorsetshire *hīr-n* = A.Sax. *ȝrn-an* 'to run', and that base, *hīr*, corresponds of course to the Lat. *cur-* of *curro*. Again if the S. vb. *sal* 'go' is one with the vb. *ṣṛ* 'go', we have the analogue of this *sal* in the Greek ἀλλομαι and Lat. *salio*, whence *sal-tu-s* 'a sheep or cattle run'. I am the more inclined to attach some value to this conjecture, because as *fal* of *fallere* 'to cause to fall' seems to furnish the only root for *fors fortis*, so does *sal-* for *sors sortis* 'that which leaps from the urn' (*situla*), a noun, from

which has come the verb *sortiri* of the Latin and the verb *sortir* (with a very different power, more akin to the original root) of the French. Lastly let me observe that if the Sanskritists had been contented to derive *sarit* 'a river' from a root *ṣṛ* 'go' or rather 'run', there could have been little objection, our own terms 'current' and 'watercourse', Bull's 'Run', and 'runlet' exhibiting a similar origin. Such terms as *saras* 'marsh or marshland' and *ap* 'water' have not the same justification.

SECOND PART.

It would be to shrink from the task I have undertaken, were I not to take into special consideration the great work of Bopp, who appears with something like general consent to be entitled the founder of Comparative Grammar as a science; and the claim upon my attention is only the stronger, that his 'Vergleichende Grammatik', the first portion of which was published in 1833, has been recently reprinted with some changes and considerable additions (1857-60).

Here, as in what I have already said, I shall without further apology for my temerity proceed to state unservedly the objections that have presented themselves to my mind, not expecting those objections to be accepted as valid, but desirous that they may attract the notice of scholars whose more intimate acquaintance with the subject will enable them to detect any errors I may have committed. The contest is happily one in which the victorious and the defeated must alike be gainers, the one object of both parties being to promote the cultivation of the science of language.

First of all then I find in the very title of the commencing chapter (Schrift- und Laut-System) what appears to me unphilosophical, viz. the precedence given to writing over sound. Over a large portion of our globe there exist whole races

possessed of the faculty of speech, but without any knowledge of written symbols; and indeed no small part of the population even of this country is in this position. But I should have passed over this matter, if the error, so to call it, had not told unfavourably on the arguments that follow. The very first paragraph in the chapter gives to three of the vowels a special character, which, as it appears to me, is not due to them. Thus the title of original vowels (*Urvocale*) is assigned to *a*, *i*, *u*; and this, I believe, on no other ground than that the Sanskrit alphabet had special characters for these, when the sounds of *e* and *o* may have been denoted by combinations of the first three, much as the French language employs its diphthongs *ai* and *au* as simple vowels. Had the school of philology founded by Bopp looked upon the materials for oral language as belonging to the domain of physical science, and wholly independent of those other forms of language which are addressed to the eye, such an error could not have occurred. In particular I must repeat the regret, which I already gave expression to in the year 1852 (*Proceedings*, Vol. 5, p. 192), that the valuable paper on Vowel-sounds which was read by Professor Willis before the Cambridge Philosophical Society (Nov. 28, 1828 and March 16, 1829), seems to have been wholly unnoticed by the leading Scholars of Germany. At any rate I for one¹ have never yet come across the slightest allusion to this paper or to the principles established in it in any German writer, while on the other hand I have read much from this quarter that would never have been written by any one acquainted with the results of Mr. Willis's experi-

¹ I find I have not done justice to German scholars in this remark. In Dr. Bindseil's *Abhandlungen zur allgemeinen vergleichenden Sprachlehre* (Hamburg 1838) p. 84 reference is made to Professor Willis's paper, and from the appended note I learn that the paper itself was reproduced in the German language in Poggendorff's *Annalen der Physik und Chemie*. Still Dr. Bindseil himself seems to have been satisfied with a bare reference, making little or no use of the principle, nor does his work appear to have met with much notice among his countrymen. It stopped abruptly with the first volume, although this contains only a general introduction and a treatise on gender.

ments. Nay I do not recollect to have seen in any of their prominent works in the field of philology any reference to that physiological organ which may literally be called the *primum mobile* of human speech, I mean the two *chordae vocales*. Now that Professor Czermak of Prague by his simple apparatus has enabled the enquirer to witness the action of these musical strings in the living man, we may hope that the study of oral language may be placed on its proper basis. It will then be laid down as the first dogma that as vowel-sounds constitute the substance of language (for brevity I drop the word 'oral', which is the only form here under consideration), so the character of any vowel depends almost wholly on the distance for the time between the *chordae vocales* and the margin of the lips, in other words on the length of the vocal pipe, the position of the tongue being of no moment so long as it does not close the passage of air. So thoroughly definite and mathematical is the character of the physical experiments, on which Professor Willis's results are founded, that he has given numerical values to the distances that belong to such of the vowels as are most familiar to English ears. At the same time as the number of points in a line is infinite, so the vowel-sounds pass by imperceptible gradations from the one extreme *i* (the sound in *feet*) to the other extreme *u* (or *oo* in *boot*). Thus it is wholly owing to the imperfection, yet necessary imperfection of alphabets, that there is but a limited set of symbols for vowel-sound. The number itself is essentially infinite; and it was therefore a subject of amusement as well as regret to hear some few years ago that a conclave of learned philologists was then sitting in London to determine, among other high matters, what was the full number of vowels.

But the vowel-order *i, e, a, o, u* (with the sounds which prevail on the continent), as resulting from Professor Willis's experiments, would have supplied the German philologists with a principle capable of solving pretty well all the problems that arise in connection with the 'Vocalismus', not merely of the Indo-European family, but of language

in general. In the paper already referred to (Vol. V, pp. 191-204) I have shown in some detail that it explains the *umlaut* and *rück-umlaut* so-called of German philology, the formation of plurals in English &c. by what Grimm calls 'motion', that is an alteration of the root-vowel, as in *geese* from *goose*, and generally the assimilation of adjoining vowels so familiar in all the Tatar languages and prevalent to a considerable extent in the Keltic, Teutonic, and Classical languages, to say nothing of others. In p. 203 of the paper, I gave from my colleague, Professor Malden, a tabular view, showing the full development of the principle in the changes of Greek vowels and diphthongs. And I have little doubt that the mysterious *Guna* and *Vṛiddhi* of Sanskrit are simply results of the same law.

No doubt Bopp has allusions to the principle of vowel-assimilation, but these are altogether incidental. Thus it is only when he passes from the Sanskrit (§§ 41, 42) to deal with the Zend, that he notices some cases where the presence of a *y*, *i*, or *e* affects the vowel of an adjoining syllable, and in § 46 mention is made of a similar euphonic influence belonging to a Zend *v* (*w*). But these are matters which should not be treated as peculiarities of the Zend. The philologist is bound to state the law of vowel-assimilation in its broad simplicity.

But there is another point in which Sanskritists seem to have been misled by the habit of looking at language in its written aspect. They ascribe to the Sanskrit, in accordance no doubt with Indian authority, two vowels, *r̥* and *l̥*, which at any rate do not present themselves in the vowel-series of the Cambridge Professor. Moreover it is admitted that this vowel *r̥* is closely related to the ordinary liquid *r*. May I propose as the probable solution of the whole difficulty the following? It is well known that the two liquids *r* and *l* often lead to the disappearance of an adjoining vowel, most persons would say to a metathesis of the vowel, a doctrine which I hold to arise from an inaccurate view of the matter, though this for the present is not important. Our own *thorough*, for example, appears

in the two shapes *through* Eng. and *durch* Germ. Again in our provinces the form *brid* is at times used, where the prevalent language prefers *bird*; so *pretty* and *perty* coexist. The Latin too has *truc-* and *toru-o-*, and the Greek *ῥακος* and *ῥακος*, with but little distinction of meaning and no distinction of origin. In such cases it is convenient to have a notation which will readily adapt itself to the two varieties of pronunciation; and on this principle it would not have been unwise to employ such a form as *brd*, *prty*, to represent at once *bird* and *brid*, *perty* and *pretty*. The Slavic languages are not less given to such varieties than others; and accordingly words without any represented vowel occur in the Bohemian vocabulary, as *krt* 'mole', *krk* 'neck', *blb* 'blockhead', *wlk* 'wolf'. Yet Dobrowsky does not on this account class *r* and *l* with the vowels of the language. Possibly the habit of virtually dropping the letters *r* and *l*, as in the case of *bird* in the mouth of a Londoner (*bōd*), and *talk*, *calm* generally, as well as the Fr. *meilleur*, may have had its counterpart in India, and so have lent some encouragement to the doctrine that they are vowels.

But to return to the ordinary vowels, if a language is limited to three symbols for their representation, it is a matter of course that *a* should have a first preference, because lying in the middle of the series it is for that very reason the easiest to pronounce and consequently the most common; and after *a* the vowels *i* and *u* have the next claim, as occupying the two extremities.

It has also been urged that the Sanskrit alphabet has a special claim to our consideration in its philosophic completeness. But this claim is open to grave doubt, seeing that it appears to have been without any character for the sound, if indeed it possessed the sound itself, that is heard in the initial consonants of our English *thin* and *thine*, *fat*, *eat*, in the two consonants of the Fr. *juge* and the final of the German *cin-fach*. On the other hand it appears superfluously rich in its ten aspirates distributed through the so-called gutturals, palatals, cerebrals, dentals, and labials; that is, if our informants be right in pronouncing these

asperates as we pronounce the italic consonants of *blockhouse*, *loghouse*, *coachhouse*, *bridgehouse*, *carthouse*, *guardhouse*, *chophouse*, *clubhouse*. If such be the correct pronunciation, the non-asperate character together with the simple *h* might surely have sufficed. I have also assumed that व (va of German Sanskritists) corresponded to an English *w*. But if it be really a *v*, then a *w* is wanting; if it be at one time a *v*, at another a *w*, then we have another defect in the alphabet, two uses of a single symbol. But these very difficulties about the pronunciation seem to be valid reasons why we should select our primary facts from the known sounds of living tongues, rather than draw from alphabets of ancient date, no matter how venerable, in which the problems of pronunciation must to a considerable extent be full of difficulty, if not insoluble.

The second main-heading in Bopp's work is "On roots" (von den Wurzeln). As regards the preliminary discussion which treats of the distribution of languages into classes, I will confine myself to the remark, that as in the preceding chapter, so here again the author appears to have been led astray by the consideration of written language. No doubt the Chinese is to the eye monosyllabic. To the ear not so, for it is well known to those who have learnt to speak the language in China itself, that it abounds in disyllabic and polysyllabic words, whose unity, as with us, is denoted by the possession of a single accent. Thus Bopp is simply wrong in his statement of facts about the Chinese language (§ 108, p. 201, note); and again his definition of the Semitic family as one having disyllabic roots, is at variance with the doctrine now maintained by many of the first Hebrew Scholars that these apparent roots are in truth secondary forms. And indeed the Hindostani furnishes an instructive parallel, for here too it seems the existing verbs cannot be reduced to forms of less than two syllables, unless we pass from the limits of the Hindostani to the parent Sanskrit.

I must also point to another instance of error similarly caused. The peculiar notation employed for Hebrew words

in which symbols for consonants play the most important part and the habit of denoting variations of meaning to a great extent by mere variation of vowels, as *katul* 'killed' with a fem. *ktul-ah*, and *kotel* 'killing' with a fem. *kottl-ah* (§ 107, p. 196), have together led Bopp and his followers to call the consonantal combination *ktl* the root of the verb in question, although this combination is for the ear an absolute nullity. Nor is he himself blind to this inference, for he expressly says: "A Semitic root is unpronounceable." As well might he, with the English words *bind*, *band*, *bond*, *bound*, *bundle* before him, set down as the root of this English verb the letters *bnd*.

But I pass to a graver matter, and one that affects the whole texture of the book. The German philologist, departing from the course marked out by his Indian authorities, refuses to accept the doctrine that all words are traceable back to verbs. Accordingly he divides the roots of the Indo-European family into two classes. "The main principle of Word-building in this class," says he (§ 109a, p. 203), "appears to me to lie in the union of verbal and pronominal roots which together constitute, as it were, the life and soul" (of the language). Poetical escapades of this kind naturally excite a suspicion of weakness in a theory. I propose then to examine this doctrine of pronominal roots in some detail. It is one that is also maintained by Prof. M. Müller in his Lectures on language (p. 272 &c.). His nomenclature indeed is slightly different from that of Bopp's. To 'verbal' he prefers the term 'predicative' and instead of 'pronominal' he talks of 'demonstrative' roots; but substantially the two writers agree. As Prof. Müller is somewhat more definite than his fellow-countryman in his statements on this subject, I will quote a few lines from him. "If they (our primitive ancestors)", says he, "wanted to express *here* and *there*, *who*, *what*, *this*, *that*, *thou*, *he*, they would have found it impossible to find any predicative root that could be applied to this purpose." And hence he says soon after: "We must admit a small class of independent radicals, not predicative in the usual sense of the word,

but simply pointing, simply expressive of existence under certain prescriptions." I accept the challenge implied in the first of these paragraphs, or rather accepted it many years before it was given, for already in 1847 in our 'Proceedings' (Vol. III, p. 56) I put forward the theory that such a verb as our own 'ken' or 'look' as an imperative would supply what was wanted. In the paper to which I refer, the problem was considered in considerable detail, alike from the formal and logical points of view. Thus as regards the mere shape of the words, I showed that pronouns of the third person exhibited an initial guttural in pretty well all the languages of Europe and Asia from the Atlantic to the Pacific, and from the Mediterranean to the Arctic sea. On the other hand I produced similar evidence for the presence of a final nasal, and so accounted for the form of the Sanskrit *kim* which is set down as the 'dhātu' of the relative, but by its final letter has been, I find, a stumbling-block to Sanskritists. In short I considered that a syllable *ken*, or something like it, appeared to be the basis of pronominal words of the third person, including in that term demonstratives, relatives, and interrogatives, which I held to be of one stock. On the other hand I regarded this basis of pronouns to be one with our English verb *ken* 'see'. But of course I could not rely on our English language alone or even its German congeners. As *ken*, or if it be preferred *con*, is the simple root whence comes our derived verb *k(e)n-ow* or *k(o)n-ow*, in precise agreement with the verbs *bell* and *bellow*, so the root in question virtually exists in all those languages which possess a representative of *know*, as Latin with its *gnosco*, Greek with its *γινωσκω*, and Sanskrit with its *jñā*. Over and above this I pointed to the suffix *ce* of Latin demonstratives, as *hic*, *istic*, *illic*, *sic*, *nunc* &c., and the so-called interjection *en* 'behold', as exhibiting our root *ken* in two fragmentary varieties, much as a particle of totally different origin yet identical form, the Homeric *κεν*, takes in Greek the several corrupted forms of *κε* or *κα* and *αν*. Further as the range I claimed for the pronominal base *ken* extended to the

Pacific, so I quoted from the Chinese itself a verb *ken* 'see'. But I failed to notice the simple verb in Sanskrit. Let me now supply this omission by producing the reduplicative verb in *mi*, *chi-ket-mi* 'I see'. This verb Bopp himself identifies as regards root with the Sanskrit verb *chî* 'perceive, know' and this again with the Zend *chin* (V.G. 109 b. 2, Anm., p. 239), so that the change of *ken* to *ket* is no difficulty for Bopp; and I confirm this by the parallel case of the Latin pronominal forms *cit-ra*, *cit-ro*, *cit-erior*, *cit-imus*. I am further indebted to Bopp for a knowledge of three other analogues of my verb, *quita* or *kita* of the Philippines, the New-Zealand *kitea*, and Malagash *hita*, words also signifying 'to see' and identified by himself with the Sanskrit *ket* (§ 87. 2). Thus the area of the verb is as extensive as that of the pronoun. On the side of form then there remains nothing to desire; and as to meaning I would ask whether any idea could be in better keeping with pronominal demonstratives than that of 'see', 'look'. The very word "demonstrative" which Prof. Müller selects for his definition, suggests this interpretation; and he himself adds that their office is "to point" and so determine "locality". It would be more correct to say that it belongs to the finger to point and to the voice only to call attention to the finger's direction by uttering the word 'look'. It is with this feeling that the French has formed its *voici* and *voilà*, and even in such a phrase as Terence's *Luciscit hoc iam* (Haut. III, 1) the full expression of the pronoun requires some such translation as: 'It is getting light, look, already'. When we ourselves utter the word *this* or *that*, we do little more than invite the person addressed to direct his eye to some object at which we are pointing, so that in real power these words are equivalent to an imperative 'look'. No doubt the mind is not at once reconciled to the identification of a verb with an adjective, much less to the declension of a verb as though it were an adjective. Yet if the Latin *ecce* 'behold' is a verb, and few will venture to deny it, we have a perfect parallel in such phrases as *eccum me*, *eccos video incedere patrem et magistrum*, as used by Plautus. For the

full details of my argument I must of course refer to the paper itself. But whether my theory be right or wrong, I trust I have said enough to show that Prof. Müller's broad denial of the possibility of finding a suitable 'predicative' root is untenable.

On the other hand let us look at the general theory of roots, whether 'verbal' or 'pronominal' as put forward by the German School. Bopp indeed puts aside for the most part the question of the origin of words as not falling within the scope of his work, but Prof. Müller speaks somewhat more definitely on this subject. Yet his views, I think, will not be found satisfactory to others, and seem not altogether satisfactory to himself, for after touching on the topic at the beginning of his book, he practically postpones the question to his last chapter, pp. 349-399, and even then he nearly reaches the end of the chapter before he comes to the point. It is only in page 391 that he says: "And now I am afraid that I have but a few minutes left to explain the last question of all in our science—How can sound express thought?" I find another reason for doubting whether he is a firm believer in his own theory. The said chapter begins with an admirable extract from a work of Dugald Stewart's which spurns with contempt "that indolent philosophy which refers to a miracle whatever appearances both in the material and moral worlds it is unable to explain." I say then that when Max Müller transcribed these words, he had not yet given a thoroughly cordial assent to the view of language with which the chapter ends, for he himself in his distress practically summons to his aid the *deus ex machina*, first telling us (p. 392) that "man in his primitive and perfect state possessed the faculty of giving expression to the rational conceptions of the mind," and then adding that "that faculty was an instinct, an instinct of the mind as irresistible as any other instinct." Further in a note he says: "The faculty peculiar to man in his primitive state, by which every impression from without received its vocal expression from within, must be accepted as an ultimate fact." For myself I can only look upon this last

passage as a simple admission that he has no solution of the problem to offer, while the preceding assumption, that language is the result of instinct, seems to savour of that indolent philosophy which the Scotch philosopher is quoted to condemn. Again the assertion that language first came into play, when man was "in his primitive and perfect state", seems hardly consistent with the tone of the first lecture, in which he led his hearers to anticipate a very different conclusion. That lecture begins with a justification of the phrase "Science of Language", and then refers the origin of every one of our sciences to the agency of man as stimulated by his "wants" when society was yet semi-barbarous or half-savage; and his argument further implies that all the sciences, including of course that of language, were things of gradual growth, beginning in what was humble and lowly. All this is surely at variance with his later theory that "the 400 or 500 roots" which are "the constituent elements" of language, are "phonetic types produced by a power inherent in human nature", and "exist, as Plato would say, by nature; though with Plato we should add that when we say by nature, we mean by the hand of God." One cannot but think that such explanations must have been intended for the class of people, so well described by Prof. Müller himself (p. 364), those "who prefer the unintelligible which they can admire to the intelligible which they can only understand." But probably the real interpretation of these inconsistencies is to refer them to some antagonism in his own mind, as between the principles which were nurtured in him while yet on German ground and the influence of an Oxford atmosphere.

Yet after all there is an advantage in the publication of a self-contradictory book. The writer is as it were twice-armed. Let an opponent attack a position in the book at the same time putting forward his own view, and the author has his reply in a Well but have not I myself said so? The advantage is parallel to what one so often finds in Cicero's letters. Habitually passing to and fro in his anticipation of the future, according as he was in an over-

sanguine or too desponding mood, the wavering statesman was able in the issue of events, no matter what that issue might have been, to boast of his wonderful foresight and say "Didn't I tell you so?" Or there may be yet another explanation. The nine lectures were severally delivered and so probably written with something like a week's interval between every two. In such cases it is less easy to secure consistency, and what was said in a review of some serial novel may apply here, that the author seems to have written the beginning without any foresight of the end and the end without any recollection of the beginning.

But before I pass from his lectures I take the opportunity of commenting on two other kindred matters. In p. 352 having said that "man could not by his own power have acquired the faculty of speech which is the distinctive character of mankind, unattained and unattainable by the mute creation", he confirms his proposition by a reference to Wilhelm v. Humboldt's writings: "Man is only man through language, but to invent language he must already have been man." This is a taking argument, and one that would be thoroughly valid on the assumption that language must have been created so to say at one gush, like a metallic casting. But if we include in our view the possibility of a gradual and slow development of the faculty, such as M. Müller himself in his first chapter assigns to the creation of all the sciences, including by implication the science of language itself, the whole difficulty is dispelled. On this theory the human mind and the faculty of speech react each on the other, and thus "the foundation-stone of what was to be one of the most glorious structures of human ingenuity in ages to come may have been supplied by the pressing wants of a semi-barbarous society" (Lectures p. 5).

But there is another writer, and he not a German, who as agreeing in one of the two phases of the Oxford Professor's book claims our attention. The Dean of Westminster ('Study of Words' p. 16) says: "God gave man language, because he could not be man without it." This seems to

imply that language was contemporary with man's creation. May I be permitted then to ask how this doctrine is to be reconciled with what I suppose will be allowed on all hands as a fact, that the primitive language must have been wholly wanting in terms for spiritual and metaphysical ideas, seeing that the roots of language in their first meaning are very generally held to have a special reference to the material world. If the Dean's view then be right, at the very time that primitive man existed in the most perfect, the most spiritual condition, he was yet destitute it would seem of terms to correspond with all the sublimer elements of his mind. In saying that terms for spiritual ideas are generally traceable to a material origin I have in view such cases as the derivation of *anima* 'soul' from *an* 'to blow', of *spirit* from *spirare* 'to breathe', and of *ghost* as connected with *gust*, with *gas*, with *yeast* (Lectures on Language, p. 387); but I must demur to the Professor's derivation of *soul*, Gothic *saivala* from *saiv-s* 'the sea', and still more to his explanation that "the soul was originally conceived by the Teutonic nations as a sea within heaving up and down with every breath and reflecting heaven and earth on the mirror of the deep." As I have said before, I am always alarmed when I find poetry doing duty for logic. Still in reliance on more sober examples I venture to affirm again that the late formation of spiritual language is more consistent with the theory of man's progressive improvement than with the converse theory of his degradation, in other words more consistent with the first phasis of M. Müller's book than with the second.

The 'instinctive' origin of language, as laid down in the 'Lectures', might to some minds have suggested the inference that language ought then to be the same for all people in all countries, and that every infant at the outset of its little life would have been possessed of useful speech; but a condition of things so much to be desired is sadly at variance with fact. This difficulty however the author of the theory at once meets by a little corollary to his theory, that "man loses his instincts as he ceases to want them." Yet in

speaking of his "demonstrative" roots (p. 272) he seems to imply that the instinctive movement still retains its force. "The sound *ta* or *sa*", says he, referring to the Sanskrit pronouns, "for 'this' or 'there' is" (note the present tense) "as involuntary, as natural, as independent an expression as any of the predicative roots." It must be due to some unhappy idiosyncrasy I suppose that I myself feel not the slightest tendency to follow such an impulse, however natural, however involuntary it ought to be. If I want to say 'this', I say *this*; if I want to say 'there', I say *there*. I certainly do not say either *sa* or *ta*.

But admitting for the nonce the new doctrine of pronominal or demonstrative roots, let us consider the purposes to which they are applied by Bopp and his Oxford disciple. In the instances I am about to quote from these two writers, I wish special attention to be paid to the habitual, almost universal assumption, that if the conditions of outward form be satisfied, it is unnecessary to enter into any logical proof of the appropriateness of the idea. As the references on this head to Max Müller will be but few, those to Bopp numerous, it may be convenient to give precedence to the disciple over the master. In the index to the "Lectures" under the word *declension* I find the proposition that "most of the terminations of declension" are "demonstrative roots". Again in the text (p. 274) we are told that "the Latin word *luc-s*" is formed by "the addition of the pronominal element *s*" and signifies literally 'shining-there'; and he goes on to say that by adding "other pronominal derivatives" we get "*lucidus, luculentus, lucerna* &c." What these other pronominal elements are or how they are fitted for the purpose he deems it unnecessary to tell us. So in p. 221 he says that "the short *i* of the Sanskrit locative *hṛidi* 'in the heart' is a demonstrative root and in all probability the same root which in Latin produced the preposition *in*." He goes on to deal with the formation of the genitive, dative, and accusative, but in a manner so misty to my comprehension that I fail to pick up a single idea and can solely refer to his book pp. 221-224.

Bopp starts (§ 105) with the doctrine that the class of roots he calls pronominal "give origin to the pronouns, to original prepositions, to conjunctions, and particles." In § 115 he advances a step farther, claiming "the case-endings as at any rate for the most part of like origin." Looking upon the nouns of language as the *Personae Dramatis* of the World of Speech, he holds that "the original office of case-suffixes was to express the mutual relations between these 'Personae' in respect of place"; and with this feeling he asks "what class of words could be better qualified to fulfil such an office, than those which at once express personality and the idea of place, whether nearer or more remote, whether on this side or on that." Accordingly (in § 134, p. 277) the *s* of the nominative is referred to the pronoun *sa* 'he, this, that', fem. *sā*; (in § 156, p. 320) the *m* of accusatives masc. and fem. to the compound pronouns *i-ma* 'this', *a-mu* 'that', and the final *t* which presents itself in the neut. nom. and acc. of certain pronouns, as *tat* and *kat* of the Vêda-dialect to the neut. pron. *ta*, Gr. *to*. Again in § 158 the suffix *ā* of the instrumental case is "as he believes" but a lengthened variety of the pronoun *a* and one with the prep. *ā* 'to' (Germ. *an*), a meaning however which, one might have thought, would be more in place in the accusative. In § 164, p. 329 the datival *ē* is said probably to belong to the demonstrative *ē*, "which *ē* however is apparently only an extension of the stem *a*", that is the very pronoun which has already done duty for the instrumental. In § 179 *t* we are told is the characteristic of the ablative and "no one (I quote his own words) who has once acknowledged the influence of prepositions or case-endings, can have any doubt in referring it to the demonstrative stem *ta* 'this' which has already in the neut. N. and Acc. put on the nature of a case-symbol and will presently be found supporting the character of a personal suffix in verbs"; so that Bopp seems to think that the fact of its employment in two duties is a reason for adding a third duty. Most people I think would have arrived at an opposite conclusion. In § 184, p. 378 and § 194, p. 393 the

genitival suffix *s* is held to be one with that of the nom. and so the same as *sa* 'this', while the longer suffix *sya* of genitives is the Vaidic pron. *sya*, that is, a compound of two pronouns *sa* 'this' and the relative *ya*. Lastly the *i* of the locative he identifies, like Prof. Müller, with the demonstrative *i*.

I might be charged with a want of fairness to Bopp if I omitted to report an argument by which he defends his theory as regards the nominative *s* in the masc. and fem. In the declension of the simple pronoun *sa* 'this' he observes that it is only the nom. m. and f. that present the *s*, the neut. nom. and all the oblique cases having an initial *t*, just as in Greek we have δ , η with a mere asperate, but afterwards $\tau\omicron$, $\tau\omicron\nu$, $\tau\eta\varsigma$, $\tau\omicron\nu$ &c., so that there is a peculiar fitness in the employment of this pronoun for the two forms for which he claims it. However he subsequently damages his theory by admitting (§ 345) that originally the *s* may have been carried through all the cases and numbers excepting only the neuters, and quotes the Vaidic locative *sasmin* for *tasmin*, and the old Latin *sum*, *sam* &c. for *eum*, *eam* &c. And even this persistence in excluding an *s* from the neuter is at variance with his own statement (ibid.) that the Greek $\sigma\eta\tau\epsilon\varsigma$, $\sigma\eta\mu\epsilon\rho\nu$ stand for $\sigma\omicron$ - $\epsilon\tau\epsilon\varsigma$, $\sigma\omicron$ - $\eta\mu\epsilon\rho\nu$, which $\sigma\omicron$ he himself holds to be of the same stock with the Sansk. *sa*.

Thus for all the case-endings it is enough with our author to find some pronoun signifying 'this' or 'that' or 'what', it matters little to him which, and to defend himself behind the position that case-endings are in their nature of a locative character. He fails to see that the pronouns in question are but pointers and define only position, and even then had no definite meaning in the outset of things, until aided by the pointing fingers. He himself indeed admits (§ 371, p. 180) that the same pronoun originally signified 'this' or 'that', 'nearer' or 'farther', the mind (he should have said the finger) supplying the necessary limitation. But while the demonstrative pronouns at most define only the 'here' or the 'there', it is the special office of case-

endings to deal with motion as well as rest, to talk of the 'whence' and the 'whither' as well as the 'where'. Nay if Bopp's system were valid, we might freely interchange all the case-endings. But I have yet two other objections to offer, which seem each of them fatal to his doctrine. In the first place the form he assigns to the case-endings is in most instances a very late and degraded form. For example the locative and dative, which I believe to have been of one origin, have assigned to them as suffixes nothing but the vowels *ê* and *i* respectively. But the Latin in *i-bi*, *ali-bi*, *utru-bi* exhibits a *b*, and as the Greek habitually has φ as the representative of a Latin *b*, there can be little doubt that the Homeric *ovqavo-qi* presents the suffix in a more accurate shape than the ordinary Sanskrit locative. There is still another letter to reestablish in its proper position, a final *n*; and Bopp himself admits that *ovqavoqiv* is the older form whence *ovqavoqi* was derived. The Latin *nobis*, *vobis* by their long vowel also betray the loss of an *n*, and still more accurately defined is the suffix in the Old-Prussian dat. pl. in *man-s* (§ 215, p. 424). Nay I cannot but suspect that the Sanskrit in its masc. loc. *tas-min* has also in the last three letters a satisfactory equivalent for the *qiv* or *bin*, for on grounds independent of the present question (see Proceedings III, p. 66, note §, and IV, p. 30) I should claim *tas* rather than *ta* for the root-syllable of the pronoun, and this view is confirmed by several other cases of the pronoun. So too the Umbrian locative appears to have had a suffix *men* or *mem* (§ 200, p. 400), and the Zend for the dative of the first personal pronoun has *mai-byâ*, the long *a* of which would have a satisfactory explanation in the disappearance of a nasal. But to take a more general survey of the question, I would object to the fragmentary manner in which the school of Bopp pursue the enquiry into the form of case-suffixes. Each case must originally have had a common form of its own, no matter to what declension a noun belonged, no matter what its gender; and again it is easy to see in nearly every case that the plural and the so-called dual forms (which in fact

are but varieties of plurals) contain in addition to the case-suffix of the singular a second suffix denoting plurality, either a nasal syllable as in our *ox-en*, or a sibilant as in our *cow-s*. Hence in our search for the full forms of case-suffixes we are entitled and therefore bound to include all the forms belonging to a given case without distinction of declension or gender or number.

Then again on the other side Bopp appears to be unhappy in his dealings with his so-called pronominal roots. These also he has robbed, as it seems to me, of a final *n*, which readily interchanged as well with the liquid *m* as with members of its own dental class, *t* and *s*. Thus for the first syllable of the Latin *is-to*- I find a more satisfactory explanation of the *s* than Bopp's own theory (§ 343) that it results from "a petrification" of the nominative *s* of the simple pronoun *is*. But I go further. In his zeal for pronominal roots he seems positively to invent them, as for example *ma* (§ 368), *u* (§ 1002), and above all his favourite *sma* (§ 165 &c.), of which he makes a most abundant, but I fear most unsatisfactory use.

But it is a special office of Bopp's pronominal roots to supply a corps of prepositions, and accordingly he lays himself out for at least an easy solution of the problems likely to present themselves. The ideas of 'above' and 'below', of 'before' and 'behind', of 'in' and 'out' stand in the relation of opposite poles to each other. The metaphor is Bopp's own. Hence the demonstrative pronouns are admirably suited to act as the needful symbols for these ideas, and so, what is particularly convenient, as they signify at once 'this' and 'that', 'on this side' and 'on that side', from one and the same pronoun we may deduce prepositions of directly opposite powers (§ 995). Thus from the pronoun *a*, to take that first as exhibiting the most wonderful fertility, with the aid of various suffixes, whose meaning seems to be a matter of not the slightest moment, for he never stops to explain them, we have S. (i. e. Sanskrit) *a-ti* 'over', S. *a-dhas* 'under', Lith. *a-nt* 'up', Germ. *ent*, Lith. *a-t* 'to', 'back'; S. *a-dhi* 'over', 'up' (§ 997), with

Lat. *ad* 'to'; S. *a-pi* 'over', 'up' (§ 998), with *επι*; S. *a-bhi* 'to' (§ 999), with *αμφι*, Lat. *amb* or *am* 'round', Germ. *bei*, and Lat. *ob*; S. *a-pa* 'from' (§ 998), with *α-πο*, Lat. *a-b*, Eng. *o-f* (the hyphens are Bopp's)—and (§ 1007) from *a-pa* itself, through an intermediate *apara-s* 'the other' cut down to *para*, we have no less than five S. prepositions, viz. *pra* 'before', *prati* 'towards', *parā* 'back', 'away', *puras*, and *pari*. Of these again *pra* (insepar.) 'before' has for its cognates *προ*, Lat. *pro*, Germ. *ver*. Then *prati* (§ 1008) is represented by *πρоти* and *προς*; while *parā* 'back', 'away' (§ 1009) gives us *παρα*; and through a second aphaeresis a prep. *ra* 'back' in some other language, which is one with the Lat. *re* 'back'. So much for one extensive family, all the progeny of the tiny pronoun *a* 'this' or 'that', including too at once *απο* and *παρα*, at once *pro* and *re*.

To the S. pronoun *u*, if indeed such a pronoun exist, are to be referred it seems S. *u-pa* 'to', S. *u-t* 'up' as also the Gr. *υ-πο*, Lat. *sub*, and the adj. *ι-σ-τερο-ς*, together with Germ. *aus*, Eng. *out*. To meet the little difficulty about the asperate of *υπο* and the *s* of *sub*, Bopp proposes two theories: "The *s* is either a simple phonetic prefix or the remnant of a recently prefixed pronoun *sa*", which however, he adds, would be "here devoid of meaning".

The S. pronoun *ana* gives birth to S. *anu* 'after', Old-Pruss. and Slav. *na* 'up', and *ανα* 'up'; also to S. *ni* 'down', Germ. *nie-der*; also to S. *ni-s* 'out' and perhaps to the Slav. *i-su* 'out', "which may possibly have lost an initial *n*".—The loss is the more to be deplored, as we lose at the same time all resemblance between *i-su* and its parent *ana*.

Thus Bopp has thoroughly fulfilled the promises he held out, as we have from the same sources words denoting 'above' and 'below', 'to' and 'from', 'backward' and 'forward', 'absence' and 'presence', 'up' and 'down'. And then how magical the changes.

With this wonderful manufacture by the Bopp-school of prepositions and case-endings from pronominal roots it may be useful to contrast a few specimens which may show the possibility at least of deducing prepositions and case-endings

from verbs. Thus to commence with a quotation from one of Bopp's own followers, we find in the "Lectures" (p. 221): "The instrumental (in Chinese) is formed by the preposition *ÿ*, which preposition is an old root meaning *to use*." So in a little paper of my own ("Proceedings" Vol. VI, p. 120) it is stated on Premare's authority that the syllable commonly used in Chinese to denote the genitival relation (*tei*) is at times employed as a verb equivalent to the Latin *proficisci*. Again the Sanskrit inseparable preposition *ni*, Lith. *nu* 'down' is to be identified with the Lat. vb. *nu*, Gr. *νεν* 'lower', 'hold down', and the Chinese *ni* 'descend'. In the French *chez*, Ital. *casa*, and in our own *through*, Germ. *durch* and *dur* we have prepositions formed from substantives, viz. the Lat. *casa* 'house', and Germ. *thür*, Eng. *door*, Gr. *θύρα*. So little is it necessary to invent pronominal roots, as the source of prepositions.

On Bopp's derivation of particles from pronominal roots I must be brief. That words denoting 'yes' should be derived from pronouns signifying 'this' can surprise no one. Thus we assent at once to such a derivation of the Lat. *sic* and *ita* and *si* of the French &c. But Bopp is bolder, he hesitates not to deduce the S. *na* 'not' and Lat. *ne* 'not' from his pronominal stem *na* 'this or that', the Greek *μη* 'not' from his stem *ma*; and the Greek '*α* privativum' from *a* 'this' (§ 372. 1, p. 180). And here again he relies on his old doctrine that as such pronouns are qualified to denote alike 'this' and 'that' (*dieses und jenes*), in the second of these senses they may well represent negation, for what is *there* is not *here*. It is somewhat unfortunate that the pronoun *a* has on his own showing a marked tendency to express presence (§ 366), as *a-tra* 'here', *a-tas* 'from here', *a-dya* 'to-day'. Nor is this to be set down as a late innovation in the life of Sanskrit, for its position must have been already well established before the breaking up of the primeval language, seeing that (to use his own illustrations) it is found in the old Irish *a-nochd* 'to-night' of the far west, and in the Ossetic *a-bon* 'to-day' of the far east. But be this as it may, the same pronominal *a*, once firmly

possessed of negative power, is deemed by Bopp a fitting symbol for past time. "I hold the augment", says he (the initial *a* in *a-bhav-am* 'I was' for example, and so corresponding to the syllabic augment ε of $\varepsilon\tau\upsilon\pi\tau\text{-}\omega\text{v}$ &c.), "to be in its origin identical with the α *privativum*, and look upon it as expressing the negation of present time." Nay even in such forms as *leg-ê-bam* (the division is Bopp's) he once thought the long quantity of the middle vowel was referable to a suffixed augment, but his confidence in this theory has been shaken (§ 527).

Even among the verbs he is inclined to think that his pronouns play a part over and above their use in the personal endings. Of the suffixed τ in $\tau\upsilon\pi\text{-}\tau\text{-}\omega$, ν in $\delta\alpha\kappa\text{-}\nu\text{-}\omega$ and $\delta\epsilon\iota\kappa\text{-}\nu\text{-}\nu\text{-}\mu\iota$, $\alpha\nu$ in $\lambda\alpha\mu\beta\text{-}\alpha\nu\text{-}\omega$ he speaks with the greatest hesitation, yet still (§§ 494, 5) "the most probable explanation" is that they are one and all of pronominal origin, their office being "to convert the abstract of the verbs in question into a concrete". Nay even the so-called connecting vowels, as in $\varphi\epsilon\rho\text{-}\omicron\text{-}\mu\epsilon\nu$, $\varphi\epsilon\rho\text{-}\varepsilon\text{-}\tau\epsilon$, must be ascribed he thinks to a similar origin (§ 500), and indeed to our old friend *a*, for the \omicron and ε of the Greek verbs just quoted are represented in Sanskrit by an *a*.

I now leave the pronominal roots with a strong impression on my mind that Bopp has failed to derive from his theory anything that adds to the value of his book. Even in his other division of roots I cannot divest myself of a fear that he has been wanting in caution. In § 109*b* he gives us a list of thirty two root-verbs. In looking over these I find at least fourteen which I have little doubt are secondary, that is derivative verbs, and eight others that have been shorn of their fair proportions, having lost an initial or a final consonant or both. On the present occasion I cannot deal with more than a few of them, but to avoid all suspicion of undue selection, I will take a batch that follow one another, those which stand 3rd, 4th, 5th, and 6th in his series. The verb *gnā* (or *jñā*) is of course the Lat. *gnosco*, Eng. *know*, but in these verbs all that follows the liquid constitutes a suffix, while our English vb. *ken* or

rather *con* exhibits the simple verb; and, as I have elsewhere noted, the Latin participles *a-gn-itus* and *co-gn-itus* are deduced from compounds, not of *gnosco*, but of a primary verb *gon*, corresponding to our *con*. From *agnosco* and *cognosco* we should have had *agnotus*, *cognotus*. The 4th in the series, *vâ* 'blow', has suffered curtailment of its final consonant, and is really one with the 17th, *an* 'blow', which has lost its initial consonant, the two being truncated forms of a fuller *van* which appears scarcely altered in the Germ. *wann-en*, and is the parent of our *winn-ow*, *wind*, and *fan*, as also of the Latin *vannus* and *ventus*. This double corruption of *van* to *vâ* and *an* would be exactly parallel to my assumption that the Lat. *ce* and *en* come from *ken*. The 5th *stâ*, Lat. *sta*, though very generally set down as a root-verb, has a suffix or rather the remnant of a suffix in the *a*. The proof of this I find in the Latin *sist-o* as compared with *gign-o*, *γίγν-ομαι*, *μῖμν-ω*, *πῖπτ-ω*, for as these are admitted to be reduplicated forms of *γεν*, *μεν*, *πετ*, so *sist* implies a primitive *set* or something like it. To this primitive I assign the idea of 'stop', a verb which is itself probably of the same stock, and I quote in support of this translation the familiar *siste viator* or better still *s. aquam* of Virgil, *s. lacrimas* of Ovid, *s. alvom* of Pliny, I say better because there is in these phrases no trace of the upright position, which eventually attached itself to so many of the derivative forms. I may be asked here whether I propose to connect the assumed root *set* with the *sed* of Lat. *sed-ere*, *sîd-ere* (for *seid-ere*) &c. and our own *set*, *sit*. My answer to this is at present neither yes nor no, but on the logical side I see no difficulty, as we ourselves have the phrase 'to set up', equivalent to the Lat. *statuere*. Again if I am asked to account for the fact that *sta-* and its derivatives eventually possessed as an important part of their meaning that of standing or the upright position, I think I see two explanations. First the compound *a-sta* in Plautus has the simple notion of 'standing up' rather than that of 'standing near', so that the preposition is *an* (= *ana*), as in *an-hela-re* 'to send up a blast of air',

rather than the familiar *ad* 'to or near'. It should be noted too that it is precisely before an initial *s*, that the Greek *ava*, commonly reduced to *av* or rather *ov* in the Aeolic dialect, becomes further reduced to *α* or *ο* (Ahrens, de Dialectis 28, 1). The assumption that *astare* was in the end cut down to *stare*, has its parallel in our own truncation of *rise* from *arise*, for this is the original form. This theory further explains in a thoroughly satisfactory manner the prefixed vowel of the Fr. *état*, *étais*, *établir*. But independently of this argument, if the original notion of stopping be considered in connection with man, and it is of man that we commonly speak, the first result of stopping is standing.

The 6th verb *i* 'go', though found alike in Sanskrit, Greek, and Latin, I believe to be doubly corrupted. Already *it-er*, *com-it-ium*, *in-it-ium*, *ex-it-ium*, *comes* (them. *com-it-*), *pedes* (them. *ped-it-*) claim a final *t* for the root, and the forms so familiar in Plautus *per-bit-ere*, *inter-bit-ere*, *red-bit-ere*, *praeter-bit-ere*, *e-bit-ere* (the last in Plaut. Stic. 608, according to the palimpsest) exhibit an initial *b*. I have marked the *i* as long on the uniform authority of Plautus, though Forcellini hastily assigns a short *i* to these words. Then as regards the simple verb, Ribbeck has done well to follow the guidance of Fleckeisen in exhibiting *baetere* as the reading of Pacuvius in vv. 227 and 255. Thus *bat*, the root of *baetere* (as *cād* of *caedere*), is the Latin analogue of *βav* in *βav-ω*, and so only a variety of *vād* 'go', whence the imperfect tenses *vād-ere* &c. We have here an explanation of the apparent anomaly in the corresponding French verb which unites in the same conjugation, a stem *va* and a stem *i*, these, although wholly different in form, being in origin one, as *je vais*, *tu vas*, *il va* with *j'irai* &c. These two verbs *sta* and *i* may indeed be pointed to as containing the best evidence of the close intimacy between the Sanskrit, Greek, and Latin languages; but it is in the last of these three sisters, not in the Sanskrit, that we find the truest forms of the two roots.

If it be replied to what I have here urged, that the Indian

Grammarians, when they put forward a so-called 'dhātu', do not claim for it the honour of being an ultimate root, nay that they apply this term to the base of any verb though it be doubly or even trebly a derivative, I still contend that Bopp applies to his words the very name 'roots' (Wurzeln), and that his whole argument implies that the verbs so called are ultimate forms.

It would not be right to be wholly silent on his treatment of matters connected with the conjugation of verbs, but I must limit myself to the use he makes of the so-called verb substantive whether *as* or *bhū* 'be', though I may refer also to similar proceedings on the part of Prof. Max Müller. That this verb is employed in the processes of conjugation I of course do not deny, for I have myself sought to explain many forms by means of it. For example I contend that such phrases as 'I am a-dining', 'I am from dining', 'I am to dine' are found in many languages besides our own as formulae of presents imperfect or perfect and of future verbs; but then it is in the prepositions *a* (A.-Sax. *an*), *from*, and *to*, that I find the essential part of the tense-idea. Indeed the very fact of the verb 'to be' entering into all the three phrases is the best proof that it contributes but little to the notation. But Bopp and his devout worshipper proceed with far greater boldness. Thus the latter (Lectures p. 174) tells us: "*bam* in *cantabam* was originally an independent auxiliary verb, the same which exists in the Sanskrit *bhavāmi* and in the A.-Sax. *beom* 'I am'." Again (p. 234) he says: "In the Latin *bo* of *amabo* we have the old auxiliary *bhū* 'to become', and in the Greek futures in *σω*, the old auxiliary *as* 'to be'." (See also Bopp § 526 and §§ 648, 656.) This is to give to the past imperfect and the future of the Latin the very same origin, so that the Romans, it would seem, thought it no inconvenience to confound the two opposite ideas of time. Let me note too that the author of the Lectures by quoting in the one case the first person of the Sanskrit verb and in the other the mere base or 'dhātu' gives a deceptive plausibility to his argument, for one sees some resemblance to *bam* in

bhavāmi and some resemblance to *bo* in *bhū*. My own views on the formation of the Latin tenses *am-ab-a-m* and *am-ab-o* are given elsewhere (Trans. 1856, pp. 308, 9). I will here merely say that I find the symbol of past time, not in *ba*, but solely in the final *a* of *am-ab-a-m*, just as I find it in the corresponding vowel of the Lat. *er-a-m*, Gr. *ην* (= *εαν*) or *ε-τιθε-α*, and S. *a-bhav-a-m*. I have said that the two German Professors explain the *σ* of *λεξω* as the vb. subst.; but according to Bopp it is equally applicable to the aorist *ελεξα* (§ 542) and to the perfect *τετελε-σ-μαι* (§ 569). Nay even the *κ* of *εδωκα* and *δεδωκα* is deduced from the same source (*ibid.*), a change which will prepare us in some measure for a still bolder doctrine, that the strange *k* which appears in the Lithuanian imperative *dūki* 'give', is also a variety of the *s* of the vb. subst. (§ 680). As to the office it performs in this place, as in the others, not a word is vouchsafed.

As a final specimen of the sort of reasoning which is allowed in the explanation of tense-forms, I may point to a passage in the oft-quoted Lectures (pp. 317, 8). From such phrases as 'I have loved', 'amatum habeo' it is inferred that the notion of 'habeo' is specially fitted to denote the past or perfect, the fact being that the essence of this idea lies in the suffixes of *ama-tum* and *lov-ed*. And then, as something parallel, the writer quotes a Turkish phrase, which he tells us is literally "Paying belonging to me", but practically signifies 'I have paid'. I fear his knowledge of Turkish is not of the soundest, for at any rate the Latin phrase 'solvendum est mihi' and the English 'I have to pay' sound more like future than past tenses.

I shall conclude my comments on the Vergleichende Grammatik with a brief notice of the free use made by Bopp of Grammatical figures as they are called, and those too of the very class which the soberer philologers of late years have been disposed to reject as inadmissible except in rare cases, I mean the figures which imply an extension of words whether at the beginning or end or within the body. Bopp's much used terms *vorschlag*, *einschiebung*, and *zusatz*, streng-

thened occasionally by the epithet *unorganische*, stand in the place of our old friends *prosthesis* (or *prothesis*), *epenthesis*, and *paragoge*. To the curtailment or compression of words, no reasonable objection can be made, as it is the general law of language that forms should be abbreviated.

I propose to take the said figures in order.

Prothesis. The initial vowels of the words *ανερ-* (V.G. 2nd Ed. Vol. i, p. 550, note), *ονοματ-* (ibid. 1st Ed. p. 311, note), *οφρυ-* (ibid.), *ονυχ-* (ibid.) are declared to be inorganic additions. The first of the set is further declared to represent the S. *nr* or *nara*; but unhappily for this doctrine the noun *ανερ-* happens to be the example given by Dionysius of Halicarnassus, when he is speaking of Greek words that originally had the digamma; and as this letter *w* habitually interchanges with an *m* in many languages, there arises a strong suspicion that *Ἐαν-ερ-* has its root in the first syllable and so is identical with our own *man*. This is further confirmed on the one side by the English corruption of *man* to *one* (pronounced with a digamma) in such forms as *one says* and *no one*, compared with the German *man sagt* and *nie-mand*, and on the other by the Greek compounds *ποι-μανωρ* and *Ἀναξι-μανδρος* compared with *στρυ-ανωρ* and *Ἀλεξ-ανδρος*. 2. As *ονοματ-* is always held to be one with the Lat. *nomen*, and as this, being a derivative from *nosco*, must originally have had an initial *g* (cf. *co-gnomen*, *a-gnomen*), we are driven to an older *γονοματ-*, of which *γον* alone is radical. Indeed Bopp himself in his Glossary (s. v.) deduces the S. *naman* from *jnā*. 3. *Οφρυ-* being compared with the S. *bhrû* (gen. *bhruv-as*) is pronounced guilty of having in its first vowel something to which it is not entitled. But let us rather compare it with our own *eye-brow* to which *eye* contributes no small portion of the meaning. Surely then if a reasonable explanation can be given of the Greek word, such as shall include the idea of 'eye', we shall have what is more satisfactory. Now the most familiar root-syllable for 'eye' or 'seeing' is in Latin *oc* (*oculus*) and in Greek with the usual letter-change *οπ* (*οπτομαι*). But before an asperated letter

οπ will of course become οφ, as in οφ-θαλμος. I suggest then that οφρv- stands for οφ-φρv-, or I should myself prefer to say οφ-ρv-, seeing that the Greek language habitually drops an initial labial when followed by ρ. Thus we have ῥηγ-νυμ rather than Φρηγ-νυμ, Eng. *break*, and ῥαγ- rather than Φαγ-, Eng. *berry*. 4. The noun οv-vχ- I have little doubt is to be divided as here marked; and I say so partly on the evidence of the Latin *ungui-s*, *ung-ula*, *uncus*, and the Irish *ionga*, partly because vχ is a well established Greek suffix, as seen in ορ-vχ- 'dig' (ορυσσω), the sb. δι-ωρ-vχ- 'a trench', and virtually in ορ-(v)χ-o- 'a trench' (especially for vine-planting), and so closely related to the Lat. *or-d-on* which has precisely the same for its first and original meaning. Compare too for suffix βοστρ-vχ-, βοστρ-vχ-o-, βoτρ-vχ-o- as well as βοστρ-v-. Indeed most nouns in u have lost a final guttural, as the Latin *genu-*, *metu-*, *anu-* contrasted with *genuc-ulum* (Eng. *knuck-le*), *metuc-ulosus*, *anic-ula*. I might also have included the suffixes vγ and vχ, of πτερ-vγ-, χαλ-vχ-, as of the same origin with vχ. I am myself too further moved by the long-established belief in my own breast that words with an initial n have generally suffered decapitation.

Epenthesis. This doctrine is called in aid by Bopp not unfrequently, but especially when dealing with the genitive plural of certain vowel-ending Sanskrit nouns (§§ 246, 249) which he says "insert a euphonic n between the ending and the stem." Among the instances he gives of this 'inshoving' are *āśvā-n-ām* 'equorum', *trî-n-ām* 'trium', *sûnû-n-ām* 'filiorum'. And he notes it as something very remarkable that the Zend, the Old German, Old-Saxon, and A.-Saxon exhibit a similar peculiarity. Surely then he ought to have asked himself whether this n may not be the substantial part of a genitival suffix. Had he done so, he would have found I think abundant evidence in his own and other cognate languages. I have myself long been satisfied with this explanation of the *en* of the German compounds *mond-en-licht*, *has-en-lage*, and our own *earth-en-ware*, *Ox-en-ford*, *Buck-en-ham* and its equivalent *Buck-ing-ham*, as well as

the adjectives *wood-en*, *lin-en*, *silk-en* &c. And then again we have *in* as a genitival suffix in Gaelic, as *bo-in* from *bò* 'cow'. It is the more remarkable that Bopp should have failed to hit this explanation, when he himself interprets (§ 248) the *śām* of the S. *tē-śām* 'horum', *tā-śām* 'harum' as containing a double suffix, of which *ś* represents the genitival element so familiar in the singular. Secondly in § 97 and again in § 727 note, he further teaches that while a final *n* in Greek has often originated in a final *s*, such interchange is confirmed by the Prakrit. On this view *tē-śām* and *aśvā-nām* would go well together.

Again as an *n* is ever apt to become silent before an *s* (cf. *εις*, *χαριεις*, *τυφθεις*, *cosol*, *toties*), it would have been more prudent perhaps, when dealing with the suffix of the dat. pl. in Old-Prussian *mans*, not to have considered the *n* as inorganic, on the sole ground that *mas* would agree better with the S. *bhyas*. His illustration too from the Latin *ensis* and *mensis* beside the Sanskrit *asis* and *māsas* involves a similar assumption.

But we need not hunt up particular instances, when we find a wholesale manufacture of epenthetic vowels established by A. Kirchhoff in the *Zeitschrift* (i. 37) and K. Walter (*ibid.* xi. 428). Thus *ερεβινθος* and *οροβος* and the Old-Germ. *araweiz* of like meaning are convicted of having stolen the vowel which follows *r* on the sole evidence that the Lat. *ervum* exhibits no such vowel. *Ηλεκτρον* cannot be entitled to the vowel *ε*, because forsooth the S. *ark* 'shine' proves the original root to have been *alk*. Again the Greek having the two forms *ορογνια* and *οργνια* the former is declared to have a vowel that does not belong to it, in spite of the evidence of *ορεγ-ω*. Nay even the long vowel of *αλ-ω-πεκ* is 'eingeschoben'. Walter's argument turns chiefly on the assumption that forms ending in *rk*, *lk*, *rg* &c. are ultimate roots. Thus according to him *ωλακ-*, *Φωλακ-*, *αυλακ-*, *αλοκ-*, all varieties of the same word signifying 'furrow', come from a root *valk* = *Fελκ-*. Now my own conviction, founded on a long and wide examination, is that such verbs are all of them secondary. I do not be-

lieve in his suggested derivation of *αυλακ-* from *Feλκ-*, but if it were true, the Latin *vel-* (*vello*) exhibits the verb in a simpler form. But it is enough to place beside each other such pairs of words as *talk* and *tale*, *hark* and *hear*, *pluck* and *pull*, *sparg-* and *σπειρ-*, *terg-* and *τειρ-*, *calc-* and *heel*, *stirk* and *steer*, *holk* and *holl*, both Scotch verbs signifying 'to dig', the latter of which is one with Lat. *col-* 'dig'.

Paragoge. Bopp's instances of 'unorganische Zusatz' are numerous, but I shall be satisfied with quoting the Latin *genetric-* 'mother' and *iunic-* 'heifer', which are declared to have a *c* of this character, inasmuch as the S. *janitri* (§ 119) and *yūni* (§ 131) have no such letter.

His use of *Metathesis* however is carried to the greatest extreme. Indeed the term 'Umstellung', which is his name for this 'figure', incessantly presents itself to the eye. I am one of those who believe the doctrine implied in these words to be carried to an unjustifiable extent by even the more sober of philologists; but I will here confine myself to three examples selected from Bopp's book, which I cannot but expect all persons will agree with me in condemning. In § 308, p. 60 he takes in hand the Gothic adj. *hanfa* (nom. *hanf-s*) 'one-handed', and first pronounces *ha* to represent the *ka* of the S. *ēka* 'one'. This assumed, he holds the residue *nfa* to stand for *nifa*. By transposition of *nifa* he then gets *fani* which would correspond no doubt with all accuracy to the Sanskrit *pāni* 'hand'. This taken altogether must be admitted to be a strong proceeding; and a German philologist in discussing a Gothic word would have done well to cast an eye for a moment on the other Low-German and kindred dialects. Had Bopp done so, he would have found at home that for which he travels to the far East, viz. Old Norse *hnevi* 'fist' and Lowland Scotch, not to say Yorkshire, *niece*. Nay Walter Scott (Guy Mannering c. 24) has: "Twa land-loupers *knevelled* me sair aneugh or I could gar my whip walk about their lugs"; and, to quote from a more Southern dialect, Shakspeare has: "Give me your *neif*" (Mids. N. Dr. iv. 1), and: "Sweet knight, I kiss thy *neif*" (Henry IV, pt. 2, 2. 4).

In vol. i, p. 580 note, attention is drawn to an Armenian noun signifying 'man', of which the crude form is said to be *aran*. Of this the initial vowel is first discarded as a mere phonetic prefix, and then by 'Umstellung' *ran* is identified with S. *nar* or *nr*. Would it not be simpler and quite as justifiable to affirm that the Armenian *aran* was formed from the Sanskrit *nara* by reading it backward?

Lastly in his Glossary s. v. *nakha* 'nail' we have the words: "hib. *ionga* fortasse litteris transpositis e *nioga*."

In terminating my remarks on Bopp's somewhat free and bold use of 'grammatical figures' I must be permitted to throw out the hint that if by any possibility the Sanskrit forms just compared with the classical have been advanced to a dignity which is beyond their due, in other words if they are after all the more degraded of the two, then all the difficulties which have presented themselves, disappear. From the objectionable figures prothesis, epenthesis, and paragoge we should pass respectively to aphaeresis, synaeresis or crasis, and apocope. In plainer English instead of assuming words to grow and extend themselves, we should have nothing but abbreviation, a principle which seems to recommend itself to the common sense of every one. A man need not be much of a philologist to account for the abbreviation of *caravan*, *forecastle*, and *cabriolet* to *van*, *foxel*, and *cab*.

In concluding these remarks, the length of which find their only excuse in the importance of the subject, I must be permitted to say that I have written in no spirit of hostility either to Comparative Grammar or to the Sanskrit language. On the contrary fully believing that the science must be benefitted, when the philologist extends his view over many languages, especially in the older varieties, but to the exclusion of none, I sincerely trust that some of our own classical scholars will apply themselves with independence and diligence to the study of Sanskrit. My chief object in the present paper has been to check that slavish sequacity which has long interfered with the advancement of linguistic science, and I lay down my pen with some-

thing like a conviction that my hearers or readers will not so readily give their assent to such propositions as the following. Prof. Max Müller tells us (Lectures p. 167) that "His (Bopp's) work will form for ever the safe and solid foundation of Comparative Philology." Again (p. 216) "Comparative Grammar has well nigh taught us all it has to teach." And another writer, if indeed it be another writer (Saturday Review, Jan. 10), speaks of Comparative Grammar as "a science which has always prided itself on the exactness and almost mathematical precision of its method."

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